ABSTRACT

Methods and systems for animating facial features and transforming facial expressions are described. In one embodiment, a code book contains data that defines a set of facial expressions of a first person. A training set of facial expressions from a second person and corresponding expressions from the code book are used to derive a transformation function that is then applied to all of the expressions of the code book. In this manner, expressions from the first person can be realistically transformed into expressions of a second person and vice versa. Particularly advantageous aspects of the described embodiments provide a single common generic face model that is used as the basis for a fitting operation for many different faces. Use of the single common generic face model and certain user-defined constraints provide a mechanism by which correspondences between the different faces can be established. These correspondences provide a basis for facial animation operations, among which are included expression transformation.